

Letter of Introduction For "Post-Operative Knee Flexer"

In September of 1995 my wife underwent, a total knee replacement,

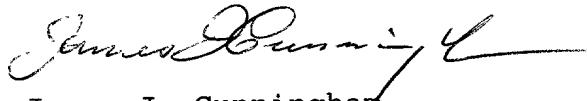
A physio-therapist was assigned to her at home. Her rehabilitation required her to reach at least a 90 degree bend in her knee to stretch the ligaments and tendons; as soon as possible after surgery. The therapist was not able to get my wife to respond because of her fear of the extreme pain.

The therapist notified her surgeon of the problem. My wife was told that he would have to return her to the operating room to for the surgeon to physically stretch the tendons. That night about 2:AM I awoke with a vision of a machine that was totally operated by the patient, the goal a 90 degree bend in her knee. The therapist would stand back and verbally coach the patient. I arose at that time and made a rough sketch of my vision. The next morning I went to "Home Depot" and purchased all the material needed to construct this machine. The therapist was due the following day. When the therapist arrived I showed her what I had made. She said, "Let's try it" and we did. Within approximately thirty minutes my wife had achieved a 90 degree and more bend. The therapist's comment was, "Fantastic". She reported this event to the surgeon and he asked to see the machine.. I rebuilt the unit with more features; one for adjustment to fit the size of the patient. I also built in safety features. A demonstration was done with another patient for Dr. Davison. He gave his whole-hearted approval and endorsement of the machine.

I was told to seek a patent for the unit. I contacted a Patent Attorney and was told the cost would range between five and eight thousand dollars. I had no way of raising that amount of money. I am eighty-three years of age and I am on a very limited income.

Recently, I was told about a book, "Patent It Yourself", by David Pressman. I am endeavoring to comply with all the requirements for filing for a patent under his guidelines.

Respectfully yours,



James J. Cunningham.

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October 30, 2001

**To Whom It May Concern:**

I have witnessed the use of Mr. Cunningham's machine which he calls the "Post-Operative Knee Flexer." I highly recommend its use in post-op knee rehabilitation. After surgery patients try to achieve a ninety degree bend. This is usually done with a therapist who must hold the knee in place while pushing the ankle to achieve various degrees of flexing. With Mr. Cunningham's invention the patient can control the stretching of ligaments and tendons and there seems to be less fear of pain normally associated with the procedure. In tests cases the patients were able to bend the knee by ninety degrees in 30-45 minutes. This machine can be used to increase the degree of flexibility as instructed by the therapist and physician's orders.

I feel you should consider this matter thoroughly. When used under the therapist and physician's guidelines rehabilitation can be achieved at a much quicker pace. I endorse the "Post Operative Knee Flexer" and feel it actually encourages the patient to follow through with therapy.

Sincerely,



Thomas Davison M.D.

James J. Cunningham  
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"POST-OPERATIVE KNEE BENDER"

SPECIFICATIONS:

1. Structure material of proto-type- primarily wood -  
2' X 4" First grade douglas fir.  
Alternate Aluminum Tubing: 2" X 4" reinforced at tension  
points.
2. Galvanized 3/8 carriage bolt and nuts.
3. Galvanized 3 $\frac{1}{2}$ " pulley wheels ( with keepers).
4. 5/16" Nylon cord (woven design).
5. 1" Foam rubber covered with vinyl on 1/2" plywood.
6. 1" X 4" #1 Fir leg drops.
7. First grade vinyl covering.
8. 2" Heavy duty Transport wheels-2 $\frac{1}{2}$ "-Hard rubber.
10. 2- Hand grips, plastic heavy duty.
11. 2 Spring loaded hinges for leg support-4". BY NATIONAL
12. 4 Metal 1" base support FEET.
13. 2- 3 $\frac{1}{2}$ " x 7" mirrors in frames.
14. Hand rails= 3/4" copper tubing formed as shown.
- 15, 2-6" Swing arm protractors.
16. Securing straps- 2" wide Velcro.

NOTE; Machine is portable and can be fully transported for use  
in the home of the patient.

NOTE: I have a complete working model with safe guards built in  
for home use.

NOTE: Machine is adjustable for any size patient.

## Drawing Reference Numerals Worksheet

PART NAME	PART NAME
10 DRAWG #1 SIDEVIEW BASE FRAME	84
12 DRAWG #2 FRONT VIEW, BASE FRAME	86
14 DRAWG #3 PLAN HEAD & BASE FRAME	88
16 DRAWG #4 SIDEVIEW OF SEAT	90
18 DRAWG #5 FRONTVIEW OF SEAT	92
20 DRAWG #6 PLAN VIEW OF UNDERSIDE, SEAT	94
22 DRAWG #7 SIDEVIEW OF SEAT	96
24 DRAWG #8 ALUMINUM BOOT	98
26 DRAWG #9 SCHEMATIC OF P.O.K.F.	100
28 8-3X5 PHOTOGRAPHS OF UNIT	102
30	104
32	106
34	108
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38	112
40	114
42	116
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50	124
52	126
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